

REMARKS

Claims 1-18 are pending. Claims 1-4, 15-16 have been rejected under 35 U.S.C. §103(a). The Examiner objects to Claims 5-10, 12-14, and 17-18 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. The Examiner has objected to the Specification as failing to provide proper antecedent basis for the subject matter of Claims 5 and 17. Claims 1, 2 and 3 have been amended. Claim 6 has been previously amended. Claim 11 has been withdrawn from consideration in a previous Amendment. Claims 1-10 and 12-18 remain for consideration upon entry of the present Amendment. No new matter has been added.

Claims 1-4, and 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,809,432 to Schuble (hereinafter the “Schuble” reference) in view of U.S. Patent Application Publication No. 2004/0109793 to McNeely (hereinafter the “McNeely” reference).

Claim 1 of the present application recites a razor assembly which comprises a razor head having at least one blade; and a shaving aid delivery system disposed within the razor head, the shaving aid delivery system including a supply of at least one shaving aid fluid, a microfluidic circuit for communicating the shaving aid fluid from the supply to a plurality of outlet ports along a surface of the shaving aid delivery system, and a transport system for driving the shaving aid fluid from the supply through the microfluidic circuit.

Schuble is directed to a disposable razor having an emollient dispensing device. The razor includes an elongate body or handle assembly and a razor head assembly. A reservoir in which an emollient is contained is housed within the handle assembly. The emollient can be supplied from the reservoir in a controlled manner to an edge of a razor blade mounted on a blade mounting face on a razor mounting block. The reservoir is constructed to include an outflow orifice or passageway for passing the emollient from the handle assembly to the razor head assembly at or adjacent the inner end of the reservoir. The reservoir also includes at the outer end a plastic or rubber bulb with a vent hole therein for inducing pressure build up within the reservoir and urging the emollient toward the outflow orifice. An emollient infeed on the razor mounting block functions cooperatively with the outflow orifice and the blade mounting

face. On the blade side of the block is an emollient distributor device consisting of channels, each of which stream from a well or collection area to an edge of the razor blade.

McNeely discloses a microfluidic device formed from a plurality of substantially planar layers sealed together. The device includes a microfluidic circuit formed from multiple layers of plastic materials having microfluidic circuit elements formed in one or more surfaces or passing through the layers. The microfluidic device is capable of control of fluid movement within the device by use of pressure driven flow in combination with valves to direct fluid flow. The McNeely invention is directed to bio-chemical testing including DNA analysis.

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a) three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art must teach or suggest all of the claim limitations.

The Applicant asserts that the Examiner has failed to demonstrate that one of ordinary skill in the art of razors would combine the Schable and McNeely references. Furthermore, the teachings of the Schable and McNeely references do not suggest or motivate combination of the references. Schable fails to disclose, teach, or suggest a microfluidic circuit, as is recited in Claim 1. The Schable reference provides no teaching whatsoever that the arrangement of channels thereof that extend from the handle to the edge of the razor blade is microfluidic in structure or suggest the desirability of utilizing a microfluidic structure. The McNeely reference is related to the field of bio-chemistry and lacks any suggestion for application of microfluidic structures to the field of razors. McNeely demonstrates that microfluidic structures are used in the field of bio-chemistry for complex pre-processing sample and hybridization solutions for probe-oligo or probe-cDNA hybridizations on microarrays. (McNeely at paragraph 97). McNeely also discloses microfluidic circuitry for use in performing polymerase chain reactions and in particular those biochemical reactions which require the sample to be heated. (McNeely at paragraph 65). This teaches away from use of microfluidic devices in razor applications were no heating of the fluid is required. Therefore, it is not reasonable to expect that one of ordinary skill in the art of razor design would be motivated to combine references from the bio-chemistry related field of microfluidic structures with that of razor design.

The Applicant respectfully submits that there is no reasonable expectation of the success that the combination of the teachings of the Schauble and McNeely references would result in a predictable solution to the problem of razor shaving aid delivery systems. The McNeely reference states “major complications in the fabrication of multi-layered microfluidic systems arise in the alignment and sealing of the various layers[,]” which indicates that, even in the field of bio-chemistry, the success of microfluidic structures may be unpredictable. (McNeely at paragraph 20). Since the aforementioned technical difficulties with microfluidic structures are apparent in the bio-chemical field, application of microfluidic structures in a different field would be at least as unpredictable and uncertain. More specifically, Schauble, McNeely or a combination thereof, lack any teaching of a microfluidic circuit for communicating shaving aid fluid in any manner, whatsoever.

The Schauble reference fails to disclose, teach, or suggest a shaving aid delivery system disposed within the razor head, the shaving aid delivery system including a supply of at least one shaving aid fluid, a microfluidic circuit for communicating the shaving aid fluid from the supply to a plurality of outlet ports along a surface of the shaving aid delivery system, and a transport system for driving the shaving aid fluid from the supply through the microfluidic circuit, as recited in Claim 1. Schauble teaches a supply of shaving aid in the handle which teaches away from a shaving aid delivery system disposed within the razor head including a supply of shaving aid fluid in the razor head, as disclosed in Claim 1. Schauble also teaches away from a transport system, disposed in the razor head, for driving the shaving aid fluid by disclosing a plastic or rubber bulb for inducing pressure build up within the reservoir which is located in the razor handle. Furthermore, Schauble fails to disclose, teach, or suggest a plurality of outlet ports along a surface of the shaving aid delivery system, as disclosed in Claim 1. Instead, Schauble discloses an emollient distributor device consisting of channels which stream from a collection area to an edge of a razor blade. Finally, the Examiner has already found Applicant’s argument persuasive that Schauble fails to disclose, teach, or suggest a microfluidic circuit, as recited in claim 1. (Office Action dated June 8, 2005, pages 3 and 4).

The McNeely reference fails to disclose, teach, or suggest a shaving aid delivery system disposed within the razor head, the shaving aid delivery system including a supply of at least one shaving aid fluid, a microfluidic circuit for communicating the shaving aid fluid from the supply to a plurality of outlet ports along a surface of the shaving aid delivery system, and a transport

system for driving the shaving aid fluid from the supply through the microfluidic circuit, as recited in Claim 1. McNeely teaches use of microfluidic structures in laboratory settings for biochemical processing which teaches away from use of a microfluidic circuit for communicating shaving aid fluid, as disclosed in Claim 1. McNeely teaches nothing about locating a microfluidic circuit in the head of a razor assembly. Applicant maintains that it is not reasonable to assume that one skilled in the art of razors would understand the operation of a microfluidic structure or attempt to introduce shaving aid fluid into one.

The combination of the Schauble and McNeely references also fails to disclose, teach, or suggest the invention of Claim 1, because the following limitations are not taught by the combination thereof. As detailed earlier, Schauble teaches away from locating a shaving aid delivery system, the transport system and the supply of shaving aid in the razor head, instead teaching both a shaving aid supply and a transport system in the razor handle. McNeely is silent on the field of razors, thus provides no direction as to where to locate a shaving aid delivery system within a razor assembly. Furthermore, McNeely discloses use of microfluidic structures in a laboratory setting for bio-chemistry applications which is not even remotely related to communication of shaving aid through a microfluidic structure, as disclosed in Claim 1.

Individually or combined, the Schauble and McNeely references fail to disclose, teach, or suggest a shaving aid delivery system disposed within the razor head, as recited in Claim 1. The Applicant asserts that not all limitations of Claim 1 have been taught by Schauble and McNeely and concludes that the subject matter of Claim 1 is not obvious over Schauble in view of McNeely. The Applicant's nonobviousness assertion is further supported by the lack of suggestion or motivation to combine of the references and the unpredictability that the combination of the teachings of the Schauble and McNeely would result in a solution to the problem of razor shaving aid delivery systems. The Examiner has already conceded that the Schauble reference does not disclose, teach, or suggest a microfluidic circuit, as recited in Claim 1 and the Applicant has set forth arguments that McNeely does not disclose, teach, or suggest a microfluidic circuit for communicating shaving aid fluid. Therefore, the Applicant concludes that the Examiner has failed to demonstrate *prima facie* obviousness. For at least these reasons, Applicant maintains that Claim 1 is allowable, and respectfully requests that the Examiner withdraw the rejection of Claim 1.

Dependent claims, by definition, further define the subject matter of the independent claims from which they depend. Because Claims 2- 4 & 15 depend from Claim 1, Claims 2-4 & 15 add recitations that further define the subject matter of independent Claim 1. Because Claim 1 is believed to be allowable for at least the reasons presented above, Claims 2-4 & 15 are therefore also believed to be allowable. Consequently, Applicant respectfully requests that the rejections of Claims 2-4 & 15 be withdrawn.

Claim 16 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Schauble in view of McNeely and in further view of U.S. Patent No. 6,473,970 to Prochaska (hereinafter “Prochaska”). As set forth above, Applicant respectfully contends that Claim 1 is in a condition for allowance. Claims that depend from an allowable claim are themselves allowable. Because Claim 16 depends from Claim 1, and because Claim 1 is allowable, Claim 16 is also allowable. Accordingly, Applicant respectfully requests that the rejection of Claim 16 be withdrawn.

The Examiner objects to Claims 5-10, 12-14, and 17-18 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. Dependent claims, by definition, further define the subject matter of the independent claims from which they depend. Because Claims 5-10, 12-14, and 17-18 depend from Claim 1, Claims 5-10, 12-14, and 17-18 add recitations that further define the subject matter of independent Claim 1. Because Claim 1 is believed to be allowable for at least the reasons presented above, Claims 5-10, 12-14, and 17-18 are therefore also believed to be allowable. Consequently, Applicant respectfully requests that the objection to Claims 5-10, 12-14, and 17-18 be withdrawn.

The Examiner also objects to the Specification under 37 CFR § 1.75(d)(1) and MPEP § 608.01(o), for failing to provide proper antecedent basis for the subject matter of Claim 5 and 17. The Examiner asserts that there is no support in the Specification for the claimed at least two reservoirs. Citing MPEP § 2163.05(III) and *In re Wertheim*, the Examiner indicates that the phrase “at least” has no upper limit, however, the Specification and the drawings do not disclose embodiments having more than two reservoirs.

The Applicant asserts that the Examiner misapplies *In re Wertheim*, 541 F.2d 257 (hereinafter “*In re Wertheim*”) to the mechanical field, in which Claims 5 and 17 reside. *In re Wertheim* is a case addressing written description support of chemical compound range limitations in claims. The current invention lies outside the chemical field where *In re Wertheim*

has been applied. (e.g., Chiron Corp. v. Genentech, Inc. 363 F.3d 1247; Union Oil Co. v. Atlantic Richfield, 208 F.3d 989; Well v. Fritz, 601 F.2d 551; In re Application of Blaser, 556 F.534; In re Salem, 553 F.2D 676;).

In re Wertheim addresses an application wherein the original specification included a range of 25% to 60% for a chemical compound. The Court ruled that a new claim limitation of “at least 35%” did not meet the written description requirement because: 1) absent the term “at least,” the specification did not clearly convey, to those skilled in the art, that the applicant invented that specific compound and 2) the Appellant failed to show that the upper limit of 60% disclosed in the specification is inherent in the claim limitation “at least 35%.” (*In re Wertheim* at pages 14-18). In other words, the Applicant must show that one skilled in the art would recognize an upper limit of 60% as the commonly known upper bound of an “at least” limitation for a particular compound.

A “mere comparison of ranges is not enough,” instead it must be decided whether one skilled in the art would recognize the invention claimed is part of the invention described in the specification. (*In re Wertheim* at pages 15-16). *In re Wertheim* was distinguished in the case of *In re Application of Voss*, 557 F.2d 812 where the court ruled that although the expression “at least 50%” crystal content does not appear in the Appellant’s parent application for glass ceramics, that the application was adequate. More specifically, the Court concluded that the “at least 50%” limitation in appellant’s claims merely quantifies the percentage crystallinity one of ordinary skill in the art at the time would have attributed to the term “glass ceramic material” disclosed in the parent application. (*In re Application of Voss*, 557 F.2d 812 at page 17).

Unlike the *In re Wertheimer* application, the Applicant’s specification conveys to one skilled in the art that the applicant invented the subject matter of Claims 5 and 17. The Examiner admits that two reservoirs are disclosed in the text of the objection, indicating that the specification has conveyed the subject matter of the invention to the Examiner. In addition, Figure 3 of the current application depicts two reservoirs, which convey to one skilled in the art that the Applicant invented the claimed “at least two reservoirs.” Furthermore, the disclosure of two reservoirs shown in Figure 3, is inherent in the claimed term “at least two,” because in the mechanical field it is well understood by one skilled in the art that that a figure depicting two reservoirs is representative and by way of example of a multitude of reservoirs. Unlike a chemical compound where the percentage of each component can change the properties of the

compound, the subject matter of the present invention would not be changed by adding additional reservoirs. The Applicant respectfully requests the Examiner's objection to the specification be withdrawn based on the grounds presented above.

The Applicant maintains that the Specification provides proper antecedent basis for the at least two reservoirs recited in Claims 5 and 17. Paragraph 57 of the Specification discloses "at least one and preferably two or more osmotic pumps 131 each associated with a reservoir containing a specific shaving aid 90." Paragraph 58 of the Specification establishes that the osmotic pump 131 includes a reservoir portion 132'. Since each osmotic pump 131 includes a reservoir 132' and the Specification discloses at least one and preferably two or more osmotic pumps 131, then it follows that the at least two reservoirs has also been disclosed in the Specification. A similar rational applies to an alternate embodiment of the osmotic pump 131a and corresponding reservoir 132a disclosed in paragraphs 69 and 70 of the Specification. In addition FIG. 3 discloses two osmotic pumps 131. FIGS. 4 & 5 disclose the detail of the osmotic pumps 131 and 131a and the corresponding reservoirs 132' and 132a. FIG. 4 discloses at least two seals 139 corresponding to the at least two osmotic pumps 131 including the reservoirs. Similarly, FIG. 5 discloses at least two plugs 139a corresponding to the at least two osmotic pumps 131a including reservoirs. In addition, paragraph 53 of the Specification also support the term "at least." Paragraph 53 reads, in pertinent part, "while the system described herein employs two shaving aids for illustration purposes, it should be noted that any number of shaving aids can be included in the shaving aid delivery system 100." Applicant believes that the Specification and the remarks above fully address the Examiner's objection pertaining to lack of proper antecedent basis and respectfully requests that the objection be withdrawn.

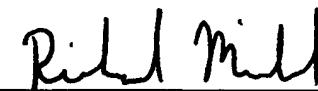
Applicant believes that the foregoing remarks are fully responsive to the Office Action and that the claims herein are allowable. In view of the foregoing points that distinguish Applicant's invention from those of the prior art and render Applicant's invention novel and non-obvious, Applicant respectfully requests that the Examiner reconsider the present application, remove the objections and rejections, and allow the application to issue.

If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is invited to telephone the undersigned.

Applicant petitions for a one month extension of time, pursuant to 37 CFR § 1.136, from the shortened statutory period for reply and submits the appropriate fee in accordance with 37 CFR § 1.17. Applicant believes that no other fees are due with the submission of this Amendment. If any charges are incurred with respect to this Amendment, they may be charged to Deposit Account No. 503342 maintained by Applicant's attorneys.

Respectfully submitted,

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